www.popular-communications.com

# POPULAR COMMUNICATIONS

OCTOBER 2011

Shortwave Listening • Scanning • AM & FM • Radio History

## *Pop'Comm* Monitoring Station Program Is a Go! p. 12

## Review: The Stylish Sangean ATS-909X Receiver, p. 29

## Propagation Tools For the SWLer, p. 36

## Almost a Teen, PSK31 Is Still a Digital Dynamo, p. 46

**On the Cover:**
**Dave Schank, KA9WXN, at WMVT in Milwaukee, Wisconsin. Details on page 54**

$5.99US/CAN

10>

0 74851 08228 7

**Join Us for Pop'Comm's Live Internet Chat, October 2**

Dave Schank KA9WXN at the Channel 36 TV Transmitter on the cover of the October 2011 Issue of Popular Communications (photo by Larry Mulvehill WB2ZPI during Field Day 2011 weekend)

# On the Cover

When Dave Schank, KA9WXN, pops the hood of WMVT-TV's Harris Sigma Series UHF transmitter he finds himself staring down a pair of E2V IOT® DT2100 final tubes supplied with 35,000 volts at 1.7 amperes. That's enough to get any engineer's attention.

Schank, one of the transmitter maintenance engineers at the Milwaukee, Wisconsin PBS station, takes meter readings to assure WMVT's 28.6-kW, over-the-air digital signal reaches its audience — generally within a 50- to 60-mile radius of the 40-foot-tall UHF antenna at 1,221 feet.

On occasion, Schank said, WMVT's signal propagates to longer distances. The station received a report from a Hammond, Indiana viewer 120 miles away. "It's one of the phenomena of the (nearby) lake. We do pretty well."

WMVT, while designated Channel 35, is Channel 36 on the air (599 MHz) and has several sub-channels.

As a safety feature, the transmitter has a Thyratron "crowbar assembly," Schank said. If there is an electrical problem, the 35,000-volt B+ shorts to ground. If it happens three times, the transmitter shuts down.

WMVT is one of the stations owned by Milwaukee Area Technical College, where Schank has been employed for nine years.

When not keeping things running at WMVT-TV, Schank likes D-Star operation on a repeater he owns and operates for 1.2 GHz (10 watts), 440 MHz and 2 meters (each 25 watts). The antenna and repeater are at 600 feet up the television station's tower.

"There's a fair amount of D-Star activity," in the region, Schank said. Coverage on 1.2 GHz is 25 to 30 miles; 50 miles on 440 and 50 miles on 144 MHz. The D-Star repeater is the first in the state, he said.

Schank, 39, first became interested in amateur radio as a kid, getting his license in 1987 as a freshman in high school.

***– Richard Fisher, KI6SN***

*(Cover photography by Larry Mulvehill, WB2ZPI)*